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10/614,731	07/03/2003	Gerald A. Hutchinson	APTLTD.048A	7527

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EXAMINER

TSOY, ELENA

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,731

Applicant(s)

HUTCHINSON ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/03/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/3/05, 1/12/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Election/Restrictions

1. Applicant's election without traverse of Claims 1-19 in the reply filed on January 3, 2005 is acknowledged. Claims 20-51 have been cancelled. Claims 1-19 are pending in the application.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-3, 5, 12, 14-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883. Although the conflicting claims are not identical, they are not patentably distinct from each other because a solution or dispersion of a Phenoxy-type Thermoplastic material such as poly(hydroxyamino ether) of '883 would either in water or organic solvent.

As to claim 3, it is well known in the art to apply a plurality of coating layers to achieve the desired thickness.

4. Claims 4-7, 9-12, 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Kennedy (US 4,505,951).

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Although Patent '883 fails to teach that polyester is polyethylene terephthalate (Claim 6), the article is preform (Claim 7); and drying source is infrared heating and forced air at temperature of the forced air is between about 10⁰C to about 50⁰C (Claims 9, 10, 12) and sufficient to prevent undesirable shrinkage of article while maximizing the removal of liquids without prematurely sealing the article's outer surface so as to entrap unexpelled liquid (Claim 11),

Kennedy teaches that coatings of a water-based polymer latex on the outer surface of the container or perform of polyester such as polyethylene terephthalate (See column 1, lines 44-46) can be dried by simultaneously heating with infra-red light energy and blowing cooling air (claimed forced air) at a temperature of about 40⁰F to 60⁰F (See column 3, lines 6-24; column 4, lines 1-13) being sufficient to prevent undesirable shrinkage of the container while maximizing the removal of liquids without prematurely sealing the surface which would entrap unexpelled liquid (See column 1, lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used polyethylene terephthalate as polyester in Patent '883 and have used simultaneously heating with infra-red light energy and blowing cooling air at a temperature of about 40⁰F to 60⁰F in Patent '883, the temperature of air being sufficient to prevent undesirable shrinkage of the container while maximizing the removal of liquids without prematurely sealing the surface which would entrap unexpelled liquid, as taught by Kennedy.

As to claims 4 and 19, It is the Examiner's position that poly(hydroxy amino ethers) would crosslink during drying under heating at temperature within claimed temperature range.

5. Claims 6, 8, 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Cobbs, Jr et al (US 4,573,429).

Although Patent '883 fails to teach that polyester is polyethylene terephthalate (Claim 6), and the method further comprises the removal of any excess material between the coating and curing/drying steps (Claim 8), and the article is rotated to achieve consistent coating and curing/drying (Claim 13), Cobbs, Jr et al teach that a container is generally made of polyethylene terephthalate (See column 1, lines 22-25) and can be coated by spraying a coating material (See Fig. 1) by rotating the container in front of one or more airless spray nozzles to achieve complete coating of the outside surface to be coated (See column 6, lines 33-43; column 9, lines 10-14) and thereby removing any excess material; the coating was dried to a tack-free or dry to the touch state by radiant heating by continuing rotation of the bottle over a hot plate (See column 12, lines 14-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made a container of Patent '883 of polyethylene terephthalate and coated the container by spraying the container while rotating and drying the container while rotating with the expectation of providing the desired complete uniform coating of the outside surface to be coated, as taught by Cobbs, Jr et al.

6. Claim 18 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Dworak et al (US 6,350,796).

Although Patent '883 fails to teach that solution or dispersion of the thermoplastic epoxy resin comprises organic acid salts made from the reaction of polyhydroxyaminoethers with phosphoric acid, lactic acid, malic acid, citric acid, acetic acid, glycolic acid and/or mixtures thereof, Dworak et al teach that an epoxy-amine adduct is at least partly neutralized with an aqueous acid, preferably an organic acid such as lactic acid or citric acid, and is dispersed by

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addition of water, preferably in a plurality of portions, with thorough mixing (See column 4, lines 26-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have neutralized polyhydroxyaminoethers of Patent '883 with an organic acid such as lactic acid or citric acid with the expectation of providing the desired solution or dispersion in water, as taught by Dworak et al.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 4-12, 14-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kennedy (US 4,505,951).

Kennedy discloses a method for making thermoplastic resin coated polyethylene terephthalate container or preform with improved barrier properties, comprising applying a water-based latex of polyvinylidene chloride (claimed aqueous dispersion) to the outer surface of the container or perform by known means such as spraying, dipping, flow coating or the coating can be rolled on (See column 2, lines 59-61), and simultaneously heating the latex on the container or

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preform with infra-red light energy and blowing cooling air (claimed forced air) at a temperature of about 40⁰F to 60⁰F (See column 3, lines 6-24; column 4, lines 1-13) being sufficient to prevent undesirable shrinkage of the container while maximizing the removal of liquids without prematurely sealing the surface which would entrap unexpelled liquid (See column 1, lines 35-39).

It is the Examiner's position that the container is withdrawn from the dip, spray, or flow coating at a rate so as to form a first coherent film inherently.

The Examiner's Note: a second thermoplastic resin of claim 1, which is of thermoplastic epoxy resin, is not considered herein because a step of applying the second thermoplastic resin is optional. Claims 4, 15-18 are not considered herein as further limiting to optional second thermoplastic resin of thermoplastic epoxy resin.

The Examiner's Note: polyvinylidene chloride is generally thermoplastic.

However, if it could be argued that polyvinylidene chloride is either thermoplastic or thermosetting, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used thermoplastic polyvinylidene chloride in Kennedy because Kennedy does not limit his invention to particular polyvinylidene chloride resin, and it is well known in the art that polyvinylidene chloride is generally thermoplastic than thermosetting.

10. Claims 1-3, 5-7, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farha (US 5,472,753) in view of Noda (US 6,872,802), further in view of Bonnebat et al (US 4,731,266).

Farha discloses a method for making a plastic laminate of three plies useful in manufacturing plastic articles, especially containers, wherein an inner layer is of a polyethylene terephthalate (claimed polyester substrate), an intermediate layer of an amorphous thermoplastic copolyester and an outer layer of a phenoxy-type thermoplastic (See Abstract) such as

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poly(hydroxy amino ethers) (See column 3, line 45), the method comprising extrusion or co-extrusion (See column 11, lines 43-45) of molten resins (See column 11, lines 57-60).

Farha fails to teach that instead of extruding molten resins, the intermediate and outer layers are applied from aqueous solutions or dispersions (Claim 1).

Noda teaches that barrier coatings (See column 18, line 30) may be applied directly to plastic articles by extrusion coating of a hot melt (solid molten or softened by heat), roller coating, brush coating, dip coating, spray coating, or cast coating as aqueous solutions or emulsions or as a reactive liquid that solidifies by a polymerization reaction induced by radiation. (See column 18, lines 19-24, 36-45). In other words, Noda teaches that extrusion coating of a hot melt is functionally equivalent to roller coating, brush coating, dip coating, spray coating using aqueous solutions or emulsions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied an intermediate layer of a thermoplastic copolyester and an outer layer of thermoplastic poly(hydroxy amino ethers) to an inner substrate layer of a polyethylene terephthalate in Farha by roller coating, brush coating, dip coating, spray coating using aqueous solutions or emulsions instead of extrusion coating of a hot melt with the expectation of providing the desired three-ply laminate, since Noda teaches that extrusion coating of a hot melt is functionally equivalent to roller coating, brush coating, dip coating, spray coating using aqueous solutions or emulsions.

The Examiner's Note: any polymer, including polymers of Farha, can be either dissolved or dispersed in water thereby forming an aqueous solution or dispersion of polymer.

Farha in view of Noda fails to teach that more than one layer of barrier coating are applied (Claim 3), each layer is substantially dried before applying next layer (Claim 1).

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Bonnebat et al teach that while forming a stack of several successive layers of barrier coatings by aqueous coating to obtain the desired thickness, each layer should be suitably dried before applying next layer because the surface layer will hinder the drying of the lower layers and separation can result if drying is not carried out. Finally, this multiplicity of coating and drying operations removes all industrial value from covering by coating operation in order to deposit thick layers (See column 3, lines 39-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied more than one layer of barrier coating are applied in Farha in view of Noda with suitably drying each layer before applying next layer with the expectation of providing the desired thickness without delamination, as taught by Bonnebat et al so that the article exhibits substantially no blushing or whitening when exposed to water.

11. Claims 4, 9-12, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farha (US 5,472,753) in view of Noda (US 6,872,802), further in view of Bonnebat et al (US 4,731,266), and further in view of Kennedy (US 4,505,951).

Farha in view of Noda in view of Bonnebat et al are applied here for the same reasons as above. Farha in view of Noda in view of Bonnebat et al fail to teach that drying source is infrared heating and forced air at temperature of the forced air is between about 10⁰C to about 50⁰C (Claims 9, 10, 12) and sufficient to prevent undesirable shrinkage of article while maximizing the removal of liquids without prematurely sealing the article's outer surface so as to entrap unexpelled liquid (Claim 11).

Kennedy teaches that coatings of a water-based polymer latex on the outer surface of the container or perform can be dried by simultaneously heating with infra-red light energy and blowing cooling air (claimed forced air) at a temperature of about 40⁰F to 60⁰F (See column 3,

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lines 6-24; column 4, lines 1-13) being sufficient to prevent undesirable shrinkage of the container while maximizing the removal of liquids without prematurely sealing the surface which would entrap unexpelled liquid (See column 1, lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used simultaneously heating with infra-red light energy and blowing cooling air at a temperature of about 40⁰F to 60⁰F in Farha in view of Noda in view of Bonnebat et al, the temperature of air being sufficient to prevent undesirable shrinkage of the container while maximizing the removal of liquids without prematurely sealing the surface which would entrap unexpelled liquid, as taught by Kennedy.

As to claims 4 and 19, It is the Examiner's position that poly(hydroxy amino ethers) would crosslink during drying under heating at temperature within claimed temperature range.

12. Claims 8, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farha (US 5,472,753) in view of Noda (US 6,872,802), further in view of Bonnebat et al (US 4,731,266), and further in view of Cobbs, Jr et al (US 4,573,429).

Farha in view of Noda in view of Bonnebat et al are applied here for the same reasons as above. Farha in view of Noda in view of Bonnebat et al fail to teach that the method further comprises the removal of any excess material between the coating and curing/drying steps (Claim 8), the article is rotated to achieve consistent coating and curing/drying (Claim 13).

Cobbs, Jr et al teach that a container can be coated by spraying a coating material (See Fig. 1) by rotating the container in front of one or more airless spray nozzles to achieve complete coating of the outside surface to be coated (See column 6, lines 33-43; column 9, lines 10-14) and thereby removing any excess material. The coating was dried to a tack-free or dry to the touch

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state by radiant heating by continuing rotation of the bottle over a hot plate (See column 12, lines 14-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have coated a container of Farha in view of Noda in view of Bonnebat et al by spraying the container while rotating and drying the container while rotating with the expectation of providing the desired complete uniform coating of the outside surface to be coated, as taught by Cobbs, Jr et al.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farha (US 5,472,753) in view of Noda (US 6,872,802), further in view of Bonnebat et al (US 4,731,266), and further in view of Dworak et al (US 6,350,796).

Farha in view of Noda in view of Bonnebat et al are applied here for the same reasons as above. Farha in view of Noda in view of Bonnebat et al fail to teach that solution or dispersion of the thermoplastic epoxy resin comprises organic acid salts made from the reaction of polyhydroxyaminoethers with phosphoric acid, lactic acid, malic acid, citric acid, acetic acid, glycolic acid and/or mixtures thereof.

Dworak et al teach that an epoxy-amine adduct is at least partly neutralized with an aqueous acid, preferably an organic acid such as lactic acid or citric acid, and is dispersed by addition of water, preferably in a plurality of portions, with thorough mixing (See column 4, lines 26-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have neutralized polyhydroxyaminoethers of Farha in view of Noda in view of Bonnebat et al with an organic acid such as lactic acid or citric acid with the expectation of providing the desired solution or dispersion in water, as taught by Dworak et al.

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Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-141523. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy
Primary Examiner
Art Unit 1762

ELENA TSOY
PRIMARY EXAMINER
ETsoy

April 25, 2005